

ABSTRACT

A method of hydrogen recovery in refineries and petrochemical operations in which some or all of the feed streams for separate PSA units are combined and utilized as feed for a single PSA unit, and in which some or all of steam reformer product and refinery offgas streams being used as feed streams for separate PSA units are combined and utilized as feed for a single PSA unit. Total hydrogen recovery is increased by maximizing hydrogen recovery from refinery offgases. The load on the steam reformer is reduced by lowering the reformer feed stream. Refinery fuel gas consumption is reduced in the steam reformer furnace. The amount of a PSA feed stream being burned as fuel or sent to flare is reduced. The load on the PSA unit receiving feed from refinery offgases is reduced. The hydrocarbon content and heating value of the tail gas from the PSA unit fed by the steam reformer product stream is enriched.